TABLE OF CONTENTS

VOLUME 37

PAGES

Portrait of ERICH VON TSCHERMAK-SEYSENEGG ..... *Frontispiece*

SHULL, G. H., ERICH VON TSCHERMAK-SEYSENEGG 1

WALTERS, MARTA S., Spontaneous chromosome breakage and atypical chromosome movement in meiosis of the hybrid *Bromus marginatus* × *B. pseudolaevipes* 8

SMITH, H. H., Relation between sterility and morphological characters in an interspecific Nicotiana cross 26

STORMONT, C., The F-V and Z systems of bovine blood groups 39

GARDNER, E. J. AND F. J. RATTY, Penetrance and expressivity of tumorous head in *Drosophila melanogaster* and relative viability of flies carrying tumorous head genes 49

BEALE, G. H., Antigen variation in *Paramecium aurelia*, variety 1 62

DEMARINIS, F., Action of the bar series in relation to temperature studied by means of Minute-n mosaic technique 75

HANSON, W. D., An interpretation of the observed amount of recombination in interchange heterozygotes of barley 90

NELSON, OLIVER E., JR., Non-reciprocal cross-sterility in maize 101

SEARS, E. R., AND A. CAMARA, A transmissible dicentric chromosome .. 125

CALDECOTT, RICHARD S., AND LUTHER SMITH, The influence of heat treatments on the injury and cytogenetic effects of X-rays in barley 136

KIDWELL, JAMES F., P. W. GREGORY AND H. R. GUILBERT, A genetic investigation of allometric growth in Hereford cattle 158

PAPAZIAN, HAIG P., The analysis of tetrad data 175

ROBERTSON, ALAN, The effect of inbreeding on the variation due to recessive genes 189

WILLIAMS, L. F., The inheritance of certain black and brown pigments in the soybean 208

HAAS, FELIX, MARY B. MITCHELL, BRUCE N. AMES, AND HERSCHEL K. MITCHELL, A series of histidineless mutants of *Neurospora crassa* 217

SEN, NIRAD K., Isochromosomes in tomato 227

BROWN, META S., AND MARGARET Y. MENZEL, Polygenomic hybrids in Gossypium. I. Cytology of hexaploids, pentaploids and hexaploid combinations 242

SHENG, T. C., AND GINGER SHENG, Genetic and non-genetic factors in pigmentation of *Neurospora crassa* 264

NOVITSKI, E., The genetic consequences of anaphase bridge formation in Drosophila 270

CAMERON, D. R., Inheritance in *Nicotiana tabacum*. XXIV. Intraspecific differences in chromosome structure 288

ROTHFELS, K. H., Gene linearity and negative interference in crosses of *Escherichia coli* 297
WRIGHT, SEWALL, The theoretical variance within and among subdivisions of a population that is in a steady state 312
GERSH, EILEEN SUTTON, Pigmentation in a mottled white eye due to position effect in *Drosophila melanogaster* 322
MARKERT, CLEMENT L., Radiation-induced nutritional and morphological mutants of Glomerella 339
LEWIS C. F., AND E. F. MCFARLAND, The transmission of marker genes in intraspecific backcrosses of *Gossypium hirsutum* L. 353
BRILES, W. E., RUTH W. BRILES, AND M. R. IRWIN, Differences in specificity of the antigenic products of a series of alleles in the chicken 359
DUARA, B. N., AND G. L. STEBBINS, JR., A polyhaploid obtained from a hybrid derivative of *Sorghum halepense* × *S. vulgare* var. *sudanense* 369
LAUGHNAN, JOHN R., The action of allelic forms of the gene *A* in maize. IV. On the compound nature of A^b and the occurrence and action of its A^d derivatives 375
CUMLEY, R. W., AND M. R. IRWIN, An immunogenetic study of species-specific antigens in the serum of species of Streptopelia 396
STERN, C., G. CARSON, M. KINST, E. NOVITSKI, AND D. UPHOFF, The viability of heterozygotes for lethals 413
GARDNER, ELDON J., GERALD H. STOTT, AND DOUGLAS M. DEARDEN, Modifiers of tumorous head genes in natural populations and laboratory stocks of *Drosophila melanogaster* 451
YOST, HENRY T., JR., The effect of intensity of infrared on X-ray induced chromosome aberrations in Tradescantia 457
LEDERBERG, ESTHER M., Allelic relationships and reverse mutation in *Escherichia coli* 469
MUNDKUR, BALAJI D., Long term adaptation to galactose by yeast 484
KRIVSHENKO, J. D., A cytogenetic study of the Y chromosome in *Drosophila buscki* 500
BRINK, R. A., AND R. A. NILAN, The relation between light variegated and medium variegated pericarp in maize 519
ALTENBURG, LUOLIN S., AND EDGAR ALTENBURG, The lowering of the mutagenic effectiveness of ultraviolet by photoreactivating light in Drosophila 545
ALTENBURG, EDGAR, JANET BERGENDAHL, AND LUOLIN S. ALTENBURG, The non-effect of intensity of the mutagenesis of ultraviolet light within a nineteen-fold range in Drosophila 554
ALTENBURG, LUOLIN S., EDGAR ALTENBURG, AND ROBERT N. BAKER, Evidence indicating that the mutation rate induced in Drosophila by low doses of ultraviolet light is an exponential function of the dose 558

Abstracts of papers presented at the 1952 Meetings of the Genetics Society of America 563
GILES, NORMAN H., JR., ALVIN V. BEATTY, AND HERBERT PARKES RILEY, The effect of oxygen on the production by fast neutrons of chromosomal aberrations in Tradescantia microspores 641
DOBZHANSKY, TH., B. SPASSKY, AND N. SPASSKY, A comparative study of mutation rates in two biologically diverse species of Drosophila 650
BAKER, WILLIAM K., AND CHARLES W. EDINGTON, The induction of translocations and recessive lethals in Drosophila under various oxygen concentrations 665
MENZEL, MARGARET Y., AND META S. BROWN, Viable deficiency-duplications from a translocation in *Gossypium hirsutum* 678
DEMPSTER, EVERETT R., I. MICHAEL LERNER, AND DOROTHY LOWRY, Continuous selection for egg production in poultry 693
HUNGATE, FRANK, AND THOMAS J. MANNELL, Sulfur-35 as a mutagenic agent in Neurospora 709
LEDERBERG, JOSHUA, LUIGI L. CAVALLI, AND ESTHER M. LEDERBERG, Sex compatibility in *Escherichia coli* 720
Index to Volume 37 731